AFL Fiber Backbone Installation Improves Wireless Coverage for a College Football Stadium

Summary

AFL created the pathways and installed the fiber backbone systems for a major university's football stadium in the Southeast. The university wanted to expand the wireless coverage to allow fans and students to communicate during home football games when the university's population grows by more than 75,000 people.

Challenge

AFL had to create the pathways from the west end zone to both the north and south sides of the stadium. The challenge was getting the cables to all four levels on both sides of the stadium.

Solution

Working hand-in-hand with the university's IT staff and the athletic department to coordinate the installation effort, AFL provided assistance in the planning of the routes of the new pathways, running conduit, performing four-inch core drills on both sides and installing 1,200 J-hooks. AFL installed 6,610 feet of fiber optic cables and 4,410 feet of power cables on both sides of the stadium to feed a total of 24 wall-mount cabinets. These fiber optic and power cables will feed all of the various types of antennas installed throughout the stadium and suites. The installation consisted of getting two 144-strand, single-mode fiber cables from the west end zone to each side of stadium and pulling twelve 24-strand, single-mode cables from the telco closets on each side to 12 wall-mount cabinets on both sides of stadium. AFL then performed a total of 960 fusion splices, performed bi-directional OTDR testing on 480 fibers and power meter testing on 480 fibers in one direction only throughout stadium.

Results

AFL implemented a flexible work schedule to avoid disruption of ongoing stadium activities during the football season. By next football season, the university will have a state-of-the-art DAS wireless installation with more than enough bandwidth now and for future builds. Fans and students attending the games will not experience problems with wireless coverage when 80,000-plus spectators fill the stadium.